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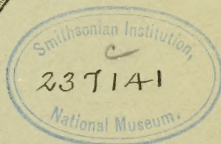
RECENT / BIVALVE / MOLLUSKS

(Pelecypoda)

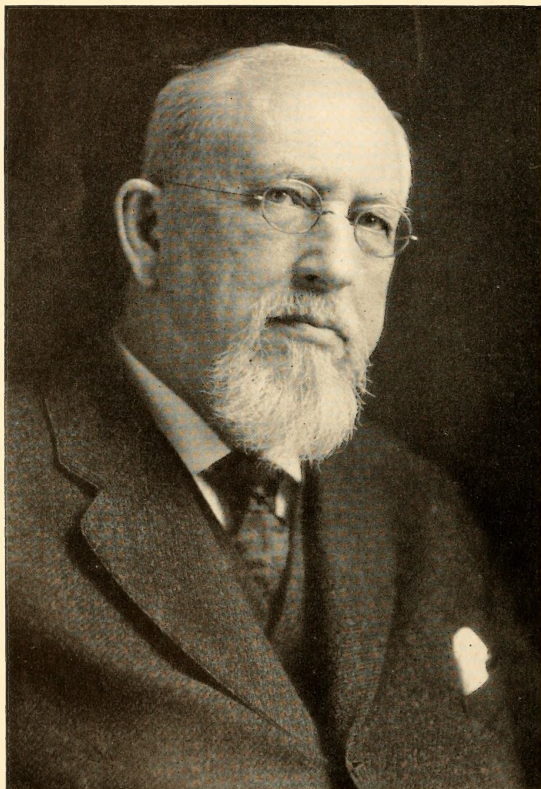
OF THE NORTHWEST COAST OF AMERICA FROM THE
POLAR SEA TO SAN DIEGO, CALIFORNIA

BY
WILLIAM HEALEY DALL, Sc. D., L. L. D.
1916

Aug. 28th



Published by
SOUTHWEST MUSEUM
Los Angeles, California



Wm. H. Dall

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July 10, 1916.

Sir:

I have the honor to submit to your consideration an important manuscript by Dr. W. H. Dall. I recommend its publication as a valuable contribution to natural history, specially desirable owing to the present lack of authoritative nomenclature in Conchology.

In appreciation of our earnest, if youthful research work; the creation of the division of Conchology in the Southwest Museum, and the installation of the famous Golisch collections, Dr. Dall has graciously consented to have the Museum publish his latest contribution to Pacific Coast Conchology.

The author enjoys international reputation, which is complemented by his official position as Honorary Curator of Conchology in the United States National Museum. His check list is therefore a specially suitable contribution to the educational aim of our Institution devoted to Scientific Research and Higher Education, as its second publication.

Yours faithfully,

Hector Alliot,
Curator.

To Doctor Norman Bridge,
President Southwest Museum.

INTRODUCTION

In the preparation of this checklist the author has utilized the results of almost exactly fifty years study of the molluscan fauna of the Pacific Coast, his personal investigations having begun in May, 1865, shortly after his arrival at San Francisco.

Experience has shown that the possession of a satisfactory checklist is one of the most efficient means of promoting the study of the fauna of any given area.

Moreover, in the case of the mollusca it is a fact that nearly all the modern textbooks are out of print and can only be had at second hand, and also that in the time which has elapsed since their publication the reformation of the nomenclature has made unprecedented progress, shown in a number of more or less scattered memoirs or essays, difficult to bring together.

The classification of the bivalves adopted here is the result of a study of all their known characters and therefore differs from the conclusions of one or two European writers based upon single or physiologically unimportant features. It is doubtless doomed to submit to future improvement as our knowledge of the anatomy of these animals is increased, but may claim to embody the results of the most modern investigations to the present time.

In a list of this kind it is impossible to give synonyms except in the most urgent cases. The addition of the year in which the original description appeared, however, will assist the student having access to the literature to supply this for himself.

The distribution given is that authenticated from actual inspection of specimens by the writer, except in a few cases where the authority is given in parentheses. Doubtless many readers of the checklist will be able to enlarge the range here printed. Communication of such data for future use is greatly desired by the author, and may be addressed to him, care of the Smithsonian Institution, Washington, D. C.

The distribution of the Mollusca on the West Coast of

America may be allotted to three grand divisions; the Arctic or Boreal, the Temperate, and the Tropical faunas.

The first, containing many Circumboreal species, extends from the Arctic or Polar Sea to the southern limit of drift ice in winter in Bering Sea. The Temperate division extends from this line southward on the west coast of America to Point Conception, California. The Tropic division reaches from this point south to Point Aguja on the coast of Peru. Each of these divisions may be subdivided into subordinate and reasonably distinct faunas; the Arctic into eastern and western or Atlantic and Pacific; the Temperate into Aleutian, Oregonian, and Californian; the Tropic into the Gulf of Californian, the Panamic, and the Ecuadorian.

Taking the distribution of a single family these distinctions might have their boundaries modified, but taking the average of the whole molluscan fauna, they appear to be well established.

The limits of these faunas are not in all cases sharply defined. Some of the less sensitive species will be found to range far beyond their divisional boundaries; and their range is largely governed by the temperature of the water as distributed by the ocean currents.

In southeastern Alaska, where the inshore channels are kept cold by the drainage from glacier streams, many Arctic forms persist, while on the outer fringe of the archipelago, in warmer water, quite a number of the more southern species extend their range northward.

The student of this list will notice many more species, which from California extend their range to Panama or even Peru than are recorded in any previous publication.

The general discussion of the limits of the several faunas and subfaunas must await the revision of the gastropod mollusks now in progress.

I have included the species of deep water dredged near the coast (although the distribution of the deep water fauna is altogether different from that of the shore) because, being subject to the sea temperatures many of those found at a depth of hundreds of fathoms at the south, in the cold water of the

deeps, follow the isotherms and appear in depths of a few fathoms in the north.

There is a special fauna existing on the shallow plateau of northeastern Bering Sea, which does not approach the shores. This, though profuse in individuals, includes hardly any characteristic species of bivalves and so does not enter into considerations based on the present checklist. In a checklist of gastropods it would furnish an amazing series of carnivorous species, chiefly belonging to the Buccinidæ, and including many unique or peculiar forms never found about the shores.

The present list contains about 474 species and varieties, of which some 86 have never appeared in any previous enumeration of the fauna, most of them having been very recently described. Doubtless many additions remain to be made with future exploration. The known range of many of the species will certainly be considerably enlarged.

The proper position of a few groups in the classification remains to be elucidated, such as the Vesicomycidæ, Turtonia, the Philobryidæ, Cooperella and a few others; they are here tentatively placed where the prevalent opinion indicates.

I am under obligations to the U. S. National Museum, and a multitude of Pacific Coast collectors for material and facilities used in preparing this checklist.

Species attributed to me with the date of 1916, are on the point of publication in the Proceedings of the U. S. National Museum.

WILLIAM HEALEY DALL

CLASS PELECYPODA.

ORDER PRIONODESMACEA (FOLIOBRANCHIATA)

Superfamily Solenomyacea

Family Solemyacidae

Genus Solemya Lamarck, 1818.

Subgenus Acharax Dall, 1908.

Acharax johnsoni Dall, 1891.

Oregon to Panama.

Acharax agassizii Dall, 1908.

Tillamook to Aguja Point, Peru.

Subgenus Petrasma Dall, 1908.

Petrasma panamensis Dall, 1908.

Santa Barbara, Cal., to Panama.

Petrasma valvulus Carpenter, 1864.

San Pedro, Cal., to Gulf of California.

Superfamily Nuculacea

Family Nuculidae

Genus Nucula Lamarck, 1799.

Nucula tenuis Montagu, 1808.

Point Barrow to Coronado Islands. Circumboreal.

Nucula tenuis, variety *expansa* Reeve, 1855.

Arctic Ocean to Sitka, Alaska; San Diego?

Nucula quirica Dall, 1916.

Chugachik Bay, Cook's Inlet, Alaska.

Nucula petriola Dall, 1916.

Off Santa Rosa Island, Cal., in 53 fathoms.

Nucula cardara Dall, 1916.

Monterey, Cal., to Lower California.

Nucula linki Dall, 1916.

Queen Charlotte Sound to Guaymas, Mexico.

Nucula sp.

Bering Sea, 1401 fathoms.

Nucula exigua Sowerby, 1832.

Golden Gate to Acapulco.

Nucula carlottensis Dall, 1897.

Queen Charlotte Islands to Anacapa Island.

Subgenus **Acila** H. and A. Adams, 1858.**Acila castrensis** Hinds, 1844.

Bering Sea to San Diego, Cal.

Family Lediidae*Genus* **Leda** Schumacher, 1817.**Leda taphria** Dall, 1897.

Bodega Bay, Cal., to Lower California.

Leda cellulita Dall, 1896.

Puget Sound.

Leda acuta Conrad, 1832.Nazan Bay, Atka Island, Aleutians, to Gulf of California.
Also Atlantic.**Leda minuta** Fabricius, 1776.

Arctic Ocean to San Diego, Cal. Also Atlantic.

Leda navisa Dall, 1916.

Farallones Islands to San Diego, Cal.

Leda amiata Dall, 1916.

Off San Diego in 488 fathoms.

Leda penderi Dall, 1910.

Queen Charlotte Islands to Santa Barbara Islands.

Leda buccata Steenstrup, 1842.

Arctic Ocean, and Bering Strait. Also Atlantic.

Leda hamata Carpenter, 1864.

Puget Sound to Panama Bay.

Leda hamata, variety *limata* Dall, 1916.

Santa Barbara to San Diego, Cal.

Leda oxia Dall, 1916.

Santa Rosa Island, Cal., to Gulf of California.

Leda liogona Dall, 1916.

Bering Sea in 1401 fathoms.

Leda pernula Müller, 1779.

Arctic Ocean to Plover Bay. Also Atlantic.

Leda radiata Krause, 1886.Arctic Ocean; Plover Bay, Eastern Siberia; Okhotsk and
Bering Seas.

- Leda fossa** Baird, 1863.
Kotzebue Sound, Alaska, to Puget Sound.
- Leda fossa**, variety *sculpta* Dall, 1916.
South of Alaska Peninsula, 69 fathoms.
- Leda fossa**, variety *vaginata* Dall, 1916.
Kasa-an Bay, Alaska, 50 fathoms.
- Leda fossa**, variety *curtulosa* Dall, 1916.
Bering Sea and Unalashka.
- Leda pontonia** Dall, 1889.
Santa Barbara Islands, Cal., to Peru and the Galapagos Islands, in deep water.
- Leda leonina** Dall, 1896.
Straits of Fuca to Latitude 36° North.
- Leda amblia** Dall, 1905.
Monterey Bay, Cal.
- Leda conceptionis** Dall, 1896.
Aleutian Islands to San Diego, Cal.
- Leda gomphoidea** Dall, 1897.
Off Tillamook, Oregon, 786 fathoms.
- Leda extenuata** Dall, 1897.
Off Sitka, Alaska, 1569 fathoms.
- Leda spargana** Dall, 1916.
Santa Barbara Islands to Point Loma, Cal.
- Leda fiascona** Dall, 1916.
Off San Diego, Cal., in 822 fathoms.
- Leda phenaxia** Dall, 1916.
Off San Diego, Cal., in 822 fathoms.
- Leda Dalli** Krause, 1886.
Unalashka, Aleutian Islands.

Genus Yoldia Möller, 1842.

Section Megayoldia Verrill, 1897.

- Yoldia thraciæformis** Storer, 1838.
Arctic Ocean to Oregon. Also Atlantic.
- Yoldia secunda** Dall, 1916.
Southeastern Alaska, in deep water.
- Yoldia beringiana** Dall, 1916.
Bering Sea to Anacapa Island, Cal.
- Yoldia montereyensis** Dall, 1893.
Chirikoff Island, Alaska, to San Diego, Cal.
- Yoldia martyria** Dall, 1897.
Kasa-an Bay, Alaska, to Gulf of California.
- Yoldia vancouverensis** Smith, 1880.
Vancouver Island (Smith).

Section Yoldia s. s.

- Yoldia myalis** Couthouy, 1838.
Arctic Ocean to Puget Sound. Also Atlantic.
- Yoldia cooperi** Gabb, 1865.
San Francisco Bay to San Diego, Cal.
- Yoldia limatula** Say, 1831.
Arctic Ocean to San Diego. Also Atlantic.

Section Cnesterium Dall, 1898.

- Yoldia scissurata** Dall, 1898.
Arctic Ocean to Sitka, Alaska.
- Yoldia seminuda** Dall, 1871.
Okhotsk and Bering Seas to Sitka, Alaska.
- Yoldia ensifera** Dall, 1897.
Southeastern Alaska to San Luis Obispo, Cal.
- Yoldia ensifera**, variety *plena* Dall, 1908.
San Diego, Cal., 80 fathoms.

Section Yoldiella Verrill, 1897.

- Yoldia siliqua** Reeve, 1856.
Norton Sound, Alaska. Also Atlantic.
- Yoldia intermedia** Sars, 1865.
Bering Strait and Norton Sound. Circumboreal.
- Yoldia orcia** Dall, 1916.
Tillamook Bay, Oregon, to San Diego.
- Yoldia sanesia** Dall, 1916.
Boca de Quadra, Alaska, to Point Conception, Cal.
- Yoldia oleacina** Dall, 1916.
Arctic Ocean north of Bering Strait.
- Yoldia capsa** Dall, 1916.
Off Tillamook Bay, Oregon, in 786 fathoms.
- Yoldia cecinella** Dall, 1916.
Aleutian Islands to Gulf of California.

Section Portlandia Mörch, 1853.

- Yoldia glacialis** Gray, 1828.
Arctic Ocean at Point Barrow. Also Atlantic.

*Genus Pleurodon Wood, 1840.**Subgenus Cyrilla A. Adams, 1860.*

- Cyrilla munita** Carpenter, 1898.
Santa Barbara Islands to Gulf of California.

Genus Malletia Desmoulins, 1832.

- Malletia talama** Dall, 1916.
Bering Sea to Oregon.
- Malletia pacifica** Dall, 1897.
Chignik Bay, Alaska, to Monterey, Cal.
- Malletia faba** Dall, 1897.
Queen Charlotte Islands, B. C., to Lower California.
- Malletia flora** Dall, 1916.
Off Sitka, Alaska, 1569 fathoms.

Genus Tindaria Bellardi, 1875.

- Tindaria californica** Dall, 1916.
Santa Barbara to San Diego, Cal.
- Tindaria gibbsii** Dall, 1897.
Queen Charlotte Islands to Coronado Islands.
- Tindaria dicofania** Dall, 1916.
Off San Diego, Cal., in 822 fathoms.
- Tindaria cervola** Dall, 1916.
Off San Diego, Cal., in 822 fathoms.
- Tindaria brunnea** Dall, 1916.
Bering Sea to Tillamook, Oregon.
- Tindaria mexicana** Dall, 1908.
San Diego, Cal., to Acapulco, Mexico, in deep water.
- Tindaria kennerlyi** Dall, 1897.
Off Sitka, Alaska, to Santa Barbara Islands, in deep water.
- Tindaria martiniana** Dall, 1916.
Cape San Martin to Santa Barbara Islands, in deep water.
- Tindaria ritteri** Dall, 1916.
Off La Jolla, Cal., 293 fathoms.

(FILIBRANCHIATA)

Superfamily Arcacea*Family* Arcidae*Genus Glycymeris* Da Costa, 1778.

- Glycymeris septentrionalis** Middendorff, 1849.
Aleutian Islands to Forrester Island, Alaska.
- Glycymeris subobsoleta** Carpenter, 1864.
Aleutian Islands to Puget Sound.
- Glycymeris corteziana** Dall, 1916.
Forrester Island, Alaska, to Cortez Bank, Cal.
- Glycymeris migueliana** Dall, 1916.
Cape Blanco, Oregon, to Magdalena Bay, Lower California, and the Cortez Bank.

Glycymeris multicostata Sowerby, 1832.

(? Monterey, Cal.,) to Gulf of Cal. and Costa Rica.

Genus Limopsis Sasso, 1827.

Section Limopsis s. s.

Limopsis skenia Dall, 1916.

Bowers Bank, Bering Sea, 30 fathoms.

Limopsis akutanica Dall, 1916.

Off Akutan Island, Aleutians, 72 fathoms.

Limopsis diegensis Dall, 1908.

Santa Barbara Islands to Coronado Islands.

Section Empleconia Dall, 1908.

Limopsis vaginatus Dall, 1891.

Bering Sea and Aleutian Islands.

Genus Arca Linné, 1758.

Subgenus Barbatia Gray, 1847.

Section Fossularca Cossmann, 1887.

Barbatia solida Broderip and Sowerby, 1833.

San Diego, Cal., to Panama.

Section Acar Gray, 1847.

Barbatia reticulata Gmelin, 1792.

San Diego to Ecuador. Also Atlantic.

Subgenus Scapharca Gray, 1847.

Scapharca multicostata Sowerby, 1833.

San Diego, Cal., to Gulf of California.

Section Bathyarcia Kobelt, 1891.

Scapharca nucleator Dall, 1908.

San Diego, Cal., to Panama.

Scapharca (corpulenta Smith, 1885, variety ?) *pompholyx* Dall,
1908.

Off Santa Barbara, Cal., to the Galapagos Islands and
Mid Pacific, in deep water.

Superfamily Pteriacea

Family Pinnidae

Genus Atrina (Gray) Adams, 1857.

Atrina oldroydi Dall, 1901.

Off San Pedro, Cal., in 25 fathoms.

*Family Pteriidae**Genus Pteria* Scopoli, 1777.**Pteria viridizona** Dall, 1916.

Long Beach, California (Lowe).

*? Family Philobryidae**Genus Philobrya* Carpenter, 1872.**Philobrya setosa** Carpenter, 1864.

Forrester Island, Alaska, to Gulf of California.

*Superfamily Ostracea**Family Ostreidae**Genus Ostrea* Linné, 1758.**Ostrea veatchii** Gabb, 1866.

Fossil at San Diego; living in the Gulf of California.

Ostrea palmula Carpenter, 1857.

Puget Sound to Gulf of California.

Ostrea lurida Carpenter, 1864.

Sitka to Cape St. Lucas.

Ostrea elongata Solander, 1786, var. *virginica* Gmelin, 1792.

Imported from the Atlantic Coast.

*Superfamily Pectinacea**Genus Pecten* Müller, 1776.*Subgenus Pecten* s. s.**Pecten diegensis** Dall, 1898.

Monterey to San Diego and the Cortez Bank.

Subgenus Chlamys Bolten, 1798.**Chlamys hericius** Gould, 1850.

Port Althorp, Alaska, to San Diego, California.

Chlamys hericius Gould, var. (?) *albidus* Dall, 1914.

Aleutian Islands.

Chlamys hastatus Sowerby, 1843.

Monterey to San Pedro, California.

Chlamys hindsii Carpenter, 1864.

Bering Sea to Cape St. Lucas.

Chlamys hindsii variety *navarchus* Dall, 1898.

Bering Sea to San Diego, Cal.

Chlamys islandicus Müller, 1776.

Arctic Ocean to Kamchatka and Puget Sound. Also Atlantic.

Chlamys islandicus, var. *beringianus* Middendorff, 1849.
Bering Sea.

Chlamys paucicostatus Carpenter, 1864.
Catalina Island, Cal., to Gulf of California.

Section Patinopecten Dall, 1898.

Chlamys caurinus Gould, 1850.
Wrangell, Alaska, to Siletz Bay, Oregon.

Section Leptopecten Verrill, 1897.

Chlamys latiauritus Conrad, 1837.
Monterey, Cal., to Lower California.

Chlamys latiauritus var. *monotimeris* Conrad, 1837.
Monterey, Cal., to the Gulf of California.

Chlamys latiauritus var. *fucicolus* Dall, 1898.
On floating kelp.

Chlamys tumbezensis Philippi, 1846.
Santa Barbara, Cal., to Peru.

Section Plagioctenium Dall, 1898.

Chlamys circularis Sowerby, 1835.
Monterey, Cal., to Payta, Peru.

Subgenus Pseudamusium H. & A. Adams, 1858.

Pseudamusium randolphi Dall, 1897.
Bering Sea to Guaymas, Mexico.

Pseudamusium tillamookense Arnold, 1906.
Pribiloff Islands, Bering Sea, to San Diego.

Pseudamusium vancouverense Whiteaves, 1893.
Bering Sea to San Diego, Cal.

Pseudamusium davidsoni Dall, 1897.
Davidson and Bowers Banks, Bering Sea.

Pseudamusium bistriatum Dall, 1916.
Off San Diego, Cal., 822 fathoms.

Pseudamusium incongruum Dall, 1916.
Off San Diego, Cal., in 684 fathoms.

Subgenus Propeamusium Gregorio, 1883.

Propeamusium alaskense Dall, 1871.
Pribiloff Islands, Bering Sea, and southward to the Santa Barbara Islands, California. Japan.

Genus Hinnites Defrance, 1821.

Hinnites giganteus Gray, 1825.

Aleutian Islands to Magdalena Bay, Lower California.

Family Limidae

Genus Lima (Brugière) Cuvier, 1798.

Subgenus Mantellum Bolten, 1798.

Mantellum dehiscens Conrad, 1837.

Monterey, Cal., to Acapulco, Mexico.

Subgenus Limatula S. Wood, 1839.

Limatula attenuata Dall, 1916.

Southern Bering Sea, the Aleutian Islands and eastward to the Shumagin Islands, Alaska.

Limatula subauriculata Montagu, 1808.

British Columbia to San Quentin Bay, Lower California.
Also Atlantic.

Superfamily Anomiacea

Family Anomiidae

Genus Anomia Linné, 1758.

Anomia peruviana Orbigny, 1846.

San Pedro, Cal., to Peru and the Galapagos Islands.

Genus Pododesmus Philippi, 1837.

Subgenus Monia Gray, 1849.

Monia macroschisma Deshayes, 1839.

Southern Bering Sea from the Pribiloff Islands to Japan and the Okhotsk Sea on the west, and eastward along the whole coast to Lower California.

Superfamily Mytilacea

Family Mytilidae

Genus Mytilus Linné, 1758.

Mytilus californianus Conrad, 1837.

Unalashka, Aleutian Islands, eastward and southward to Socorro Island.

Mytilus edulis Linné, 1758.

Arctic Ocean to San Diego, and worldwide in temperate waters.

Section Hormomya Mörch, 1853.

Mytilus adamsianus Dunker, 1856.

Santa Barbara, Cal., to Panama and the Galapagos Islands.

Genus Septifer Recluz, 1848.**Septifer bifurcatus** (Conrad) Reeve, 1837.

Crescent City, Cal., to Gulf of California.

Septifer bifurcatus var. *obsoletus* Dall, 1916.

San Diego, Cal.

Genus Modiolus Lamarck, 1799.**Modiolus modiolus** Linné, 1758.

Circumboreal. On the Pacific side Arctic and Bering Seas and southward to San Pedro, Cal., and the outlying islands.

Modiolus rectus Conrad, 1837.

Bollinas Bay, Cal., to Magdalena Bay, Lower California.

Modiolus flabellatus Gould, 1850.

Vancouver Island to San Diego, Cal.

Modiolus capax Conrad, 1837.

Santa Barbara, Cal., to Payta, Peru.

Modiolus fornicatus Carpenter, 1864.

Monterey to San Pedro and Cortez Bank, California.

Modiolus politus Verrill, 1880, var. *pallidulus* Dall, 1916.

Off Bodega Head, Cal., and south to Cerros Island, Lower California, in deep water.

Subgenus Gregariella Monterosato, 1883.**Gregariella opifex** Say, 1825.

Santa Barbara, Cal., to Gulf of California.

Subgenus Brachydontes Swainson, 1840.**Brachydontes demissus** Dillwyn, 1817.

Imported with "seed" oysters from the Atlantic Coast. San Francisco Bay, on oyster beds.

Genus Botula Mörch, 1853.*Subgenus Adula* H. and A. Adams, 1857.**Adula diegensis** Dall, 1911.

San Francisco Bay, to Cape St. Lucas. Free.

Adula falcata Gould, 1851.

Coos Bay, Oregon, to San Diego, Cal. Burrowing.

Adula californiensis Philippi, 1847.

Vancouver Island to San Diego, Cal. North Japan. Burrowing.

Genus Dacrydium Torell, 1859.**Dacrydium pacificum** Dall, 1916.

Bering Sea, 1401 fathoms.

Genus Lithophaga Bolten, 1798.

Section Diberus Dall, 1898.

Lithophaga plumula Hanley, 1844.

Monterey, Cal., to Patagonia. Also Atlantic.

Section Labis Dall, 1916.

Lithophaga attenuata Deshayes, 1836.

San Diego to Patagonia.

Section Myoforceps Fischer, 1886.

Lithophaga aristata Dillwyn, 1817.

La Jolla, San Diego Co., Cal., to Peru. Also Atlantic.

Genus Musculus Bolten, 1798.

Musculus niger Gray, 1824.

Circumboreal. Arctic Ocean to Oregon.

Musculus niger variety *obesus* Dall, 1916.

Arctic Ocean to Cape Flattery.

Musculus protractus Dall, 1916.

Nunivak Island, Bering Sea, to Monterey.

Musculus olivaceus Dall, 1916.

Bering Sea to Catalina Island, Cal.

Musculus impressus Dall, 1907.

Petrel Bank, Bering Sea.

Musculus taylori Dall, 1897.

Victoria, Vancouver Island.

Musculus lævigatus Gray, 1824.

Circumboreal. Arctic Ocean to Puget Sound.

Musculus discors Linné, 1768.

Circumboreal. Arctic Ocean to Puget Sound.

Musculus vernicosus Middendorff, 1849.

Bering Sea to Sitka.

Musculus phenax Dall, 1915.

St. George Island, Bering Sea.

Musculus marmoratus Forbes, 1838.

Circumboreal. Puget Sound. (P. P. C.).

Musculus seminudus Dall, 1897.

Bering Sea to Forrester Island, Alaska.

Genus Crenella Brown, 1827.

Crenella decussata Montagu, 1808.

Bering Sea to the Santa Barbara Islands, Cal. Atlantic.

Crenella leana Dall, 1897.

Aleutian Islands, eastward to Middleton Island, Alaska.

- Crenella columbiana** Dall, 1897.
Aleutian Islands to San Diego, Cal.
- Crenella divaricata** Orbigny, 1847.
Santa Barbara Islands to Panama Bay. Also West Indies.
- Crenella grisea** Dall, 1897.
Bering Sea to Sitka, Alaska.
- Crenella rotundata** Dall, 1916.
Santa Cruz Island, Cal., in 155 fathoms.

ORDER ANOMALODESMACEA.

A. ENSIPHONIA

*Family Periplomatidæ**Genus Periploma* Schumacher, 1817.

- Periploma planiuscula** Sowerby, 1834.
San Pedro, Cal., to Guayaquil.
- Periploma discus** Stearns, 1890.
San Pedro Bay, Cal., to San Diego.

Section Halistrepta Dall, 1904.

- Periploma sulcata** Dall, 1904.
San Pedro Bay, Terminal Island, Cal.

*Family Thraciidae**Genus Thracia* (Leach) Blainville, 1824.

- Thracia curta** Conrad, 1837.
Arctic Ocean, Bering Sea, and south to San Diego, Cal.
- Thracia beringi** Dall, 1915.
Bering Sea, Aleutian Islands and southward to Sitka, Alaska.
- Thracia challsiana** Dall, 1915.
Forrester Island, Alaska, to Gulf of Georgia.
- Thracia diegensis** Dall, 1915.
San Diego Bay, Cal.

Genus Cyathodonta Conrad, 1849.

- Cyathodonta dubiosa** Dall, 1915.
San Pedro to San Diego and the Gulf of California.
- Cyathodonta pedroana** Dall, 1915.
San Pedro Harbor and Catalina Island, Cal.

Genus Asthenothærus Carpenter, 1864.

- Asthenothærus villosior** Carpenter, 1864.
San Pedro, Cal., to Cape St. Lucas.

B. ADELOSIPHONIA

*Family Pandoridae**Genus Pandora* Hwass, 1795.*Subgenus Kennerlyia* Carpenter, 1864.**Kennerlyia grandis** Dall, 1877.

Pribiloff Islands, Bering Sea, to Siletz Bay, Oregon.

Kennerlyia glacialis Leach, 1819.

Arctic Ocean and south to Fuca Straits. Also Atlantic.

Kennerlyia glacialis var. *cutaenia* Dall, 1915.

Port Etches, Alaska.

Kennerlyia filosa Carpenter, 1864.

Nunivak Island, Bering Sea, to San Pedro, Cal.

Kennerlyia bilirata Conrad, 1855.

Forrester Island, Alaska, south to Point Abreojos, Lower California.

Kennerlyia granulata Dall, 1915.

Santa Barbara, Cal., to Gulf of California.

Subgenus Heteroclidus Dall, 1915.**Heteroclidus punctatus** Conrad, 1837 (*not* Cpr. 1864).

Vancouver Island to Gulf of California.

*Family Lyonsiidae**Genus Lyonsia* Turton, 1822.**Lyonsia striata** Montagu, 1815.

Circumboreal. Aleutian Islands to Fuca Straits.

Lyonsia arenosa Möller, 1842.

Circumboreal. Arctic Sea to Japan and the Okhotsk Sea on the west and on the east to the Aleutians and Kadiak Island, Alaska.

Lyonsia gouldii Dall, 1915.

San Francisco Bay, Cal., and south to Point Abreojos, Lower California.

Lyonsia californica Conrad, 1837.

Puget Sound to Todos Santos Bay, Lower California.

Lyonsia californica var. *haroldi* Dall, 1915.

Central California.

Lyonsia (*californica* var. ?) *nesiotes* Dall, 1915.

Catalina and Coronado Islands.

Lyonsia pugetensis Dall, 1913.

Chignik Bay, Alaska, to Puget Sound.

Subgenus Allogramma Dall, 1903.

Allogramma amabilis Dall, 1913.

Off Santa Barbara Channel, Cal., 534 fathoms.

Subgenus Entodesma Philippi, 1845.

Entodesma inflatum Conrad, 1837.

In sponges, Vancouver Island to Guayaquil.

Section Agriodesma Dall, 1909.

Entodesma saxicola Baird, 1863.

Aleutian Islands to San Pedro, Cal.

Entodesma scammoni Dall, 1871.

Port Simpson, British Columbia, (Scammon).

Genus Mytilimeria Conrad, 1837.

Mytilimeria nuttallii Conrad, 1837.

In compound Ascidians. Vancouver Island to San Diego, Cal.

Superfamily Poromyacea

Family Poromyacidae

Subgenus Dermatomya Dall, 1908.

Dermatomya tenuiconcha Dall, 1913.

Alaska Peninsula to Coronado Islands, in deep water.

Dermatomya buttoni Dall, 1916.

Monterey, Cal., (Button).

Dermatomya beringiana Dall, 1916.

Aleutian Islands to Tillamook, Oregon.

Dermatomya leonina Dall, 1916.

Off coast of Washington, 877 fathoms.

Genus Cetoconcha Dall, 1886.

Cetoconcha malespinæ Dall, 1916.

S. W. of Sitka, Alaska, 1579 fathoms.

(?) *Family* Lyonsiellidae

Genus Lyonsiella M. Sars, 1872.

Lyonsiella alaskana Dall, 1894.

S. W. of Sitka, 1659 fathoms, and off Catalina Island, Cal., in 600 fathoms.

*Family Cuspidariidae**Genus Cuspidaria* Nardo, 1840.*Section Cardiomya* A. Adams, 1864.

- Cuspidaria pectinata* Carpenter, 1864.
Monterey, Cal., to Panama Bay.
- Cuspidaria beringensis* Leche, 1883.
Bering Sea to Kadiak Island and Panama Bay.
- Cuspidaria californica* Dall, 1886.
Puget Sound to San Diego, Cal.
- Cuspidaria planetica* Dall, 1908.
Pribiloff Islands, Bering Sea, to Coronado Islands, Lower California, in deep water.
- Cuspidaria balboæ* Dall, 1916.
Cortez Bank, Cal., 60 fathoms.
- Cuspidaria glacialis* G. O. Sars, 1878.
Off San Diego, Cal., 239 fathoms. Also Atlantic.
- Cuspidaria apodema* Dall, 1916.
Off Sitka, Alaska, and south to Panama Bay, in deep water.
- Cuspidaria chilensis* Dall, 1889.
Off Oregon in 277 fathoms and south to coast of Chile in 1036 fathoms.

Genus Myonera Dall and Smith, 1886.

- Myonera tillamookensis* Dall, 1916.
Off Tillamook Bay, Oregon, 786 fathoms.

Genus Leiomya A. Adams, 1864.*Subgenus Plectodon* Carpenter, 1864.

- Plectodon scaber* Carpenter, 1864.
Catalina Island, Cal., to San Diego.

*Family Verticordiidae**Genus Verticordia* Wood, 1844.

- Verticordia ornata* Orbigny, 1846.
Catalina Island, Cal., to Panama Bay. Also Japan and the Antilles.

ORDER TELEODESMACEA.

*Superfamily Astartacea**Family Astartidae**Genus Astarte* Sowerby, 1816.*Section Astarte* s. s.

- Astarte polaris* Dall, 1903.
Aleutian and Shumagin Islands, Alaska. Circumboreal.

Section Tridonta Schumacher, 1817.

- Astarte rollandi** Bernardi, 1858.
Pribiloff and Aleutian Islands to Prince William Sound,
Alaska. Also Kamchatka.
- Astarte rollandi** var. *loxia* Dall, 1903.
Semidi Islands, Alaska.
- Astarte arctica** Gray, 1824.
Circumboreal. Arctic and Bering Sea and the Aleutian
Islands.
- Astarte borealis** Schumacher, 1817.
Polar and Bering Seas, North Japan, and eastward to
Prince William Sound, Alaska.
- Astarte alaskensis** Dall, 1903.
Southern Bering Sea, the Aleutians and south to Puget
Sound.
- Astarte compacta** Carpenter, 1865.
Puget Sound.
- Astarte fabula** Reeve, 1855.
Circumboreal. Arctic Sea and south in Bering Sea to
Nunivak Island.
- Astarte bennettii** Dall, 1903.
Polar Sea at Bennett Island, and south in Bering Sea to
Nunivak Island.
- Astarte vernicosa** Dall, 1903.
Arctic and Bering Seas. Attu to Atka Islands in the
Aleutian chain.

Section Rictocyma Dall, 1872.

- Astarte esquimalti** Baird, 1863.
Aleutian Islands to Puget Sound.

Genus Bernardina Dall, 1910.

- Bernardina bakeri** Dall, 1910.
Coronado Islands.

*Family Crassatellitidae**Genus Crassatellites* Kruger, 1823.

- Crassatellites fluctuatus** Carpenter, 1864.
Santa Barbara Islands, Cal.

Genus Crassinella Guppy, 1875.

- Crassinella branneri** Arnold, 1903.
San Diego, Cal., to Panama. Pleistocene of San Pedro,
Cal.

*Superfamily Carditacea**Family Carditidae**Genus Cardita* (Bruguière) Lamarck, 1799.*Section Carditamera* Conrad, 1838.*Cardita subquadrata* Carpenter, 1865.

Queen Charlotte Islands to Todos Santos Bay.

Genus Venericardia Lamarck, 1801.*Section Cyclocardia* Conrad, 1867.*Venericardia barbarensis* Stearns, 1890.

Santa Barbara Channel to San Diego, Cal., in deep water.

Venericardia gouldii Dall, 1902.

Off San Diego, Cal.

Venericardia stearnsii Dall, 1902.

Puget Sound.

Venericardia paucicostata Krause, 1885.

Arctic Sea to Fuca Straits.

Venericardia crebricostata Krause, 1885.

Point Barrow, Alaska, to Monterey, Cal.

Venericardia crassidens Broderip and Sowerby, 1829.

Arctic and Bering Seas and eastward to Kadiak Island, Alaska.

Venericardia nodulosa Dall.

Santa Barbara to the Coronado Islands.

Venericardia monilicosta Gabb, 1861.

Santa Barbara, Pleistocene. Recent ?

Venericardia ventricosa Gould, 1850.

Belkoffski Bay, Alaska, to Coronado Islands and Cortez Bank, Cal.

Venericardia incisa Dall, 1902.

Unalashka to the Semidi Islands, Alaska.

Subgenus Miodontiscus Dall, 1903.*Miodontiscus prolongatus* Carpenter, 1864.

Middleton Island, Alaska, to San Diego, Cal.

Miodontiscus meridionalis Dall, 1916.

Off Point Loma, Cal., 70 fathoms.

Genus Calyptogena Dall, 1891.*Calyptogena pacifica* Dall, 1891.

Clarence Strait, Alaska, to Santa Barbara Channel, Cal.

Calyptogena elongata Dall, 1916.

Santa Barbara Islands to San Diego, Cal.

Genus Milneria Dall, 1881.

Milneria minima Dall, 1871.

Monterey to Todos Santos Bay, Lower Cal., on *Haliotis*.

Milneria kelseyi Dall, 1916.

Monterey to Point Abrejos, Lower Cal.

Superfamily Chamacea

Family Chamidæ

Genus Chama Linné, 1758.

Chama pellucida Broderip, 1834.

Oregon to Chile, and Galapagos Islands.

Chama exogyra Conrad, 1838.

Oregon to Panama.

Chama frondosa Broderip, 1834.

San Diego, Cal., to Peru.

Chama buddiana C. B. Adams, 1850.

Monterey, Cal., to Panama.

Superfamily Lucinacea

Family Thyasiridæ

Genus Thyasira (Leach in) Lamarck, 1818.

Thyasira bisecta Conrad, 1849.

Off Alaska Peninsula and southward to Puget Sound.

Also Miocene and Pliocene.

Thyasira gouldii Philippi, 1845.

Bering Strait to San Diego. Also Atlantic.

Thyasira trisinuata Orbigny, 1846.

Sitka, Alaska, to San Diego, Cal. Also Atlantic.

Thyasira trisinuata var. *polygona* Jeffreys, 1863.

Korea. Gulf of Alaska to San Diego. Also Atlantic.

Thyasira cygnus Dall, 1916.

Southeastern Alaska.

Thyasira barbarensis Dall, 1889.

Fuca Straits to Gulf of California.

Thyasira excavata Dall, 1901.

Oregon to Gulf of California.

Thyasira tricarinata Dall, 1916.

Off Santa Barbara Islands, Cal., in 1100 fathoms.

Subgenus Axinulus Verrill & Bush, 1898.

Axinulus ferruginosus Forbes, 1844.

Aleutian Islands. Also Atlantic and Arctic.

Genus Axinopsis G. O. Sars, 1878.

Axinopsis viridis Dall, 1901.

Arctic Ocean, on the west to northern Japan, on the east to the Aleutian and Coronado Islands.

Axinopsis sericatus Carpenter, 1864.

Aleutian Islands south and east to Puget Sound, and Catalina Island, Cal.

Family Diplodontidæ

Genus Diplodonta Bronn, 1831.

Diplodonta aleutica Dall, 1901.

Cape Lisburne, Arctic Ocean, to the Aleutians and eastward to Sitka Bay, Alaska.

Diplodonta orbella Gould, 1852.

Pribiloff Islands, Bering Sea, to Gulf of California.

Diplodonta subquadrata Carpenter, 1855.

Catalina Island, Cal., to Panama.

Subgenus Felaniella Dall, 1899.

Felaniella sericata Reeve, 1850.

San Diego, Cal., to Panama.

Family Lucinidæ

Genus Phacoides Gray, 1847.

Subgenus Here Gabb, 1866.

Here richthofeni Gabb, 1866.

San Pedro, Cal., to Cape St. Lucas.

Subgenus Lucinisca Dall, 1901.

Lucinisca nuttallii Conrad, 1837.

Santa Barbara, Cal., to Mazatlan, Mexico.

Subgenus Lucinoma Dall, 1901.

Lucinoma annulata Reeve, 1850.

Port Althorp, Alaska, to Coronado Islands.

Lucinoma annulata var. *densilineata* Dall.

Sitka, Alaska, to Esteros Bay, Cal.

Lucinoma aequizonata Stearns, 1890.

Santa Barbara Islands to S. Lat. 38° (Chile).

Subgenus Callucina Dall, 1901.

Section Epilucina Dall, 1901.

Callucina californica Conrad, 1837.

Crescent City, Cal., to San Ignacio Lagoon, Lower Cal.

Subgenus Parvilucina Dall, 1901.

Parvilucina tenuisculpta Carpenter, 1865.

Nunivak Island, Bering Sea, to the Coronado Islands,
Lower Cal.

Parvilucina approximata Dall, 1901.

Monterey, Cal., to Panama.

Genus Divaricella Martens, 1880.

Divaricella perparvula Dall, 1901.

"Monterey" (Gabb). Cape St. Lucas to Ecuador.

Superfamily Leptonacea

Family Leptonidae

Genus Erycina Lamarek, 1806.

Erycina catalina Dall, 1916.

Catalina Island, Cal.

Erycina coronata Dall, 1916.

Off Coronado Islands, Lower Cal.

Erycina bakeri Dall, 1916.

Off South Coronado Island, Lower Cal.

Erycina balliana Dall, 1916.

Off South Coronado Island, Lower Cal.

Erycina chacei Dall, 1916.

Santa Rosa Island to Coronado Islands:

Erycina santarosæ Dall, 1916.

Santa Rosa Island, Cal.

Genus Kellia Turton, 1822.

Kellia laperousei Deshayes, 1839.

Bering and Pribiloff Islands, Bering Sea, and south to
San Diego, Cal.

Kellia suborbicularis Montagu, 1804.

Bering Island, the Aleutians, and south to Panama. Also
Atlantic.

Genus Aligena H. C. Lea, 1845.

Aligena cerittensis Arnold, 1903.

Pleistocene, San Pedro, Cal. Recent ?

Genus Rochefortia Velain, 1846.

Rochefortia tumida Carpenter, 1864.

Shumagin Islands, Alaska, to San Diego, Cal.

Rochefortia planata Dall, 1899.

Icy Cape, Arctic Ocean, south to the Shumagin Islands.
Alaska.

- Rochefortia ferruginosa** Dall, 1916.
San Francisco Bay, to Santa Rosa Island, Cal.
- Rochefortia beringensis** Dall, 1916.
Bering Island, Bering Sea.
- Rochefortia grebnitzskii** Dall, 1916.
Bering Island, Bering Sea.
- Rochefortia aleutica** Dall, 1899.
Bering Sea to Coronado Islands.
- Rochefortia compressa** Dall, 1913.
Shumagin Islands, Alaska, to Gulf of California.
- Rochefortia pedroana** Dall, 1899.
San Pedro, Cal.
- Rochefortia grippi** Dall, 1912.
San Diego, Cal.
- Rochefortia golischi** Dall, 1916.
Off Santa Rosa Island, Cal.

Genus Serridens Dall, 1899.

- Serridens oblonga** Carpenter, 1865.
San Pedro to Coronado Islands.

Genus Pseudopythina Fischer, 1884.

- Pseudopythina rugifera** Carpenter, 1864.
Commensal with *Gebia*. Puget Sound.
- Pseudopythina compressa** Dall, 1899.
Cape Lisburne, Arctic Ocean, to Acapulco. Commensal with Crustacean.
- Pseudopythina myaciformis** Dall, 1916.
Commensal with Crustacean. Puget Sound.

Genus Bornia Philippi, 1836.

- Bornia retifera** Dall, 1899.
Monterey to Santa Barbara Islands, Cal.

Genus Lepton Turton, 1822.

- Lepton meroeum** Carpenter, 1864.
San Diego, Cal.

Genus Lasæa Leach, 1827.

- Lasæa rubra** Montagu, 1804.
Vancouver Island, B. C., to Callao, Peru. Also Atlantic.

Genus Turtonia Alder, 1848.**Turtonia minuta** Fabricius, 1780.

Bering Strait and south to Magdalena Bay, Lower Cal.,
also Northern Atlantic.

Turtonia occidentalis Dall, 1871.

Plover Bay, Bering Sea.

Genus Sportella Deshayes, 1858.**Sportella californica** Dall, 1899.

Monterey, Cal.

Genus Anisodonta Deshayes, 1858.**Anisodonta? pellucida** Dall, 1916.

Monterey Bay, Cal., off Del Monte.

*Family Chlamydoconchidae**Genus Chlamydoconcha* Dall, 1884.**Chlamydoconcha orcutti** Dall, 1884.

False Bay, San Diego Co., Cal.

*Superfamily Cardiacea**Family Cardiidae**Genus Cardium* Linné, 1758.*Subgenus Trachycardium* Mörch, 1853.**Trachycardium quadragenarium** Conrad, 1837.

Santa Barbara, Cal., to Todos Santos Bay, L. Cal.

Subgenus Cerastoderma Mörch, 1853.**Cerastoderma corbis** Martyn, 1784.

Nunivak, Pribiloff, and Commander Islands, Bering Sea,
south to Hakodate, Japan, and San Diego, Cal. (Lower
Cal. ?)

Cerastoderma ciliatum Fabricius, 1780.

Circumboreal. Arctic Ocean and southward to Puget
Sound and North Japan.

Cerastoderma decoratum Grewingk, 1850.

Pleistocene of Alaska and British Columbia. Recent?

Cerastoderma californiense Deshayes, 1839.

Arctic Ocean to San Diego, Cal., North Japan and
Okhotsk Sea.

Cerastoderma californiense var. *comoxense* Dall, 1900.

Pleistocene of Vancouver Island. Recent?

Cerastoderma fucanum Dall, 1907.

Southern Bering Sea, off Unimak Island, and south to Fuca Straits.

? *Subgenus* Ringicardium Fischer, 1887.

Ringicardium procerum Sowerby, 1833.

Pleistocene, San Diego. Cerros Island to Payta, Peru.

Subgenus Fragum Bolten, 1798.

Fragum biangulatum Sowerby, 1829.

San Pedro, Cal., to Panama.

Subgenus Trigoniocardia Dall, 1900.

Trigoniocardia eudoxia Dall, 1916.

Catalina Island, Cal., to Gulf of California.

Subgenus Laevicardium Swainson, 1840.

Laevicardium elatum Sowerby, 1833.

San Pedro, Cal., south to Panama.

Laevicardium substriatum Conrad, 1837.

Catalina Island and San Pedro, Cal., to Acapulco.

Genus Serripes Beck, 1841.

Serripes gronlandicus Gmelin, 1792.

Circumboreal. Arctic Seas and south to Hakodate, Japan, and Puget Sound.

Serripes laperousei Deshayes, 1839.

Bering Strait to Hakodate, Japan, and Sitka, Alaska.

Genus Protocardia Beyrich, 1845.

Protocardia centifilosa Carpenter, 1864.

Bodega Bay to Lower California.

Protocardia centifilosa var. *richardsonii* Whiteaves, 1878.

Queen Charlotte Islands to San Francisco.

Family Vesicomycidae

Genus Vesicomya Dall, 1886.

Vesicomya ovalis Dall, 1895.

Clarence Strait, Alaska, 322 fathoms, and in Panama Bay, in 1672 fathoms.

Vesicomya lepta Dall, 1895.

Off Tillamook, Oregon, and south to the Gulf of California, in deep water.

Vesicomya stearnsii Dall, 1895.

Off La Jolla, Cal., and south to the Gulf of California, in deep water.

Subgenus Archivesica Dall, 1908.

Archivesica gigas Dall, 1895.

Off Point Sur, Cal., and in the Gulf of California in deep water.

Superfamily Veneracea

Family Veneridæ

Subfamily Dosiniinae

Genus Dosinia Scopoli, 1777.

Section Dosinidia Dall, 1902.

Dosinia ponderosa Gray, 1838.

San Diego, Cal., and south to Payta, Peru.

Subfamily Meretricinae

Genus Tivela Link, 1807.

Subgenus Pachydesma Conrad, 1854.

Pachydesma stultorum Mawe, 1823.

Santa Cruz, Cal., and south to Socorro Island.

Genus Transennella Dall, 1883.

Transennella tantilla Gould, 1853.

Sitka Harbor, Alaska, and south to Lower California.

Genus Amiantis Carpenter, 1863.

Amiantis callosa Conrad, 1837.

San Pedro, Cal., to Gulf of Tehuantepec.

Genus Pitaria (Roemer) 1857.

Pitaria newcombiana Gabb, 1865.

Monterey, Cal., to the Gulf of California and Clarion Island.

Genus Antigona Schumacher, 1817.

Section Ventricola Roemer, 1857.

Antigona fordii Yates, 1890.

Monterey, Cal., to Lower California. Panama?

Genus Saxidomus Conrad, 1837.

Saxidomus nuttallii Conrad, 1837.

Baulinas Bay, Cal., to San Diego.

Saxidomus giganteus Deshayes, 1839.

Aleutian Islands from Attu eastward and south to Monterey, Cal.

- Saxidomus giganteus** var. *brevis* Dall, 1916.
Admiralty Island, Alaska, to Tacoma, Wash.

Subfamily Venerinae
Genus Chione Megerle, 1811.

- Chione fluctifraga** Sowerby, 1853.
San Pedro, Cal., to the Gulf of California.
Chione undatella Sowerby, 1853.
San Pedro, Cal., and south to Guayaquil.
Chione succincta Valenciennes, 1833.
San Pedro, Cal., to Panama.

Genus Venus (L.) Lamarek, 1799.

- Venus kenneicottii** Dall, 1871.
Neeah Bay, Wash., to Little River, Mendocino Co., Cal.

Genus Marcia H. & A. Adams, 1857.

- Marcia kennerlyi** (Cpr.) Reeve, 1863.
Kadiak Island, Alaska, to Carmel Bay, Cal.

Section Venerella Cossmann, 1886.

- Marcia subdiaphana** Carpenter, 1864.
Sannakh Islands, Alaska, to the Santa Barbara Islands,
Cal.

Genus Paphia Bolten, 1798.
Subgenus Protothaca Dall, 1902.
Section Callithaca Dall, 1902.

- Protothaca tenerrima** Carpenter, 1856.
Puget Sound to San Quentin Bay, Lower Cal.

Section Protothaca s. s.

- Protothaca staminea** Conrad, 1837.
Commander and Aleutian Islands, to Kamchatka and
North Japan, and to Puget Sound and Socorro Island.
Protothaca staminea var. *staminea* Conrad, 1837.
Crescent City, Cal., to Socorro Island.
Protothaca staminea var. *runderata* Deshayes, 1853.
Southern Bering Sea, to Lobitas, Cal.
Protothaca staminea var. *petitii* Deshayes, 1839.
Aleutian Islands to San Quentin Bay, Lower California.
Protothaca staminea var. *laciniata* Carpenter, 1864.
Unalashka, Alaska, to San Diego, Cal.

Protothaca staminea var. *orbella* Carpenter, 1864.

Kadiak Island, Alaska, to San Diego, Cal.

Protothaca staminea var. *spatiosa* Dall, 1916.

Puget Sound to Anaheim Bay, Cal.

Protothaca grata Say, 1831.

San Pedro (Williamson). Gulf of Cal. to Panama.

Genus Liocyma Dall, 1870.

Liocyma beckii Dall, 1870.

Arctic Ocean at Point Barrow, and southward to Bering Sea and North Japan, on the east to Port Althorp, Alaska.

Liocyma scammoni Dall, 1871.

Port Simpson, British Columbia.

Liocyma viridis Dall, 1871.

Arctic Sea southward to North Japan, and on the east to the Kadiak Islands, Alaska.

Genus Venerupis Lamarek, 1818.

Venerupis lamellifera Conrad, 1837.

Monterey to San Diego, Cal.

Subfamily Gemminae

Genus Gemma Deshayes, 1853.

Gemma gemma Totten, 1834.

San Francisco Bay. Introduced from the Atlantic coast with "seed" oysters. (San Diego?)

Genus Psephidia Dall, 1902.

Psephidia lordi Baird, 1863.

Unalashka, Alaska, to Coronado Islands.

Psephidia ovalis Dall, 1902.

St. Paul Island, Bering Sea, to San Diego, Cal.

Psephidia cymata Dall, 1913.

Santa Barbara Islands, Cal., to Gulf of California.

? **Psephidia salmonea** Carpenter, 1864.

Catalina Island to San Diego, Cal.

Psephidia brunnea Dall, 1916.

Monterey, Cal., to San Ipolito Point, Lower California.

Family Petricolidæ

Genus Petricola Lamarek, 1801.

Petricola carditoides Conrad, 1837.

Vancouver Island to Lower California.

Subgenus Petricolaria Stoliczka, 1870.

Petricolaria denticulata Sowerby, 1834.

? *Family* Cooperellidae

Genus Cooperella Carpenter, 1864.

Cooperella subdiaphana Carpenter, 1864.

Queen Charlotte Islands to Gulf of California.

Superfamily Tellinacea

Family Tellinidae

Genus Tellina (L.) Lamarck, 1799.

Tellina idae, Dall, 1891.

Santa Barbara Islands and San Pedro, Cal.

Subgenus Arcopagia Leach, 1827.

Section Merisca Dall, 1900.

Arcopagia lamellata Carpenter, 1857.

San Diego, Cal., to Mazatlan.

Arcopagia declivis Sowerby, 1868.

Catalina Island, Cal., to Panama.

Subgenus Moerella Fischer, 1887.

Moerella salmonea Carpenter, 1864.

Aleutian Islands to San Pedro, Cal.

Moerella meropsis Dall, 1900.

San Diego, Cal., to the Gulf of California.

Subgenus Angulus Megerle, 1811.

Angulus carpenteri Dall, 1900.

Neeah Bay, Wash., to Gulf of California.

Angulus panamensis Dall, 1900.

Catalina Island, Cal., to Panama.

Angulus modestus Carpenter, 1864.

Vancouver Island to San Francisco, Cal.

Subgenus Oudardia Monterosato, 1884.

Oudardia buttoni Dall, 1900.

Lituya Bay, Alaska, to the Gulf of California.

Subgenus Peronidia Dall, 1900.

Peronidia bodegensis Hinds, 1844.

Vancouver Island, B. C., to Gulf of California. Japan?

Peronidia santarosæ Dall, 1900.

Santa Barbara Islands and San Diego, Cal.

Peronidia lutea Gray, 1828.

Arctic Ocean, Bering Sea, North Japan, the Aleutian Islands and east to Cook's Inlet, Alaska.

Peronidia lutea var. *venulosa* Schrenck, 1861.

Shumagin Islands, Alaska; Sakhalin Island, Japan.

Genus Metis H. & A. Adams, 1856.

Metis alta Conrad, 1837.

Santa Barbara, Cal., to San Diego.

Genus Macoma Leach, 1819.

Macoma middendorffii Dall, 1886.

Bering Strait, south to the Commander and Aleutian Islands and eastward to Chirikoff Island, Alaska.

Macoma incongrua Martens, 1865.

Arctic Ocean, south to Japan on the west and to San Diego, Cal., on the east.

Macoma brota Dall, 1916.

Arctic Ocean. Bering Sea and south to Puget Sound.

Macoma brota var. *lipara* Dall, 1916.

Bering Sea to Puget Sound.

Macoma sitkana Dall, 1900.

Kadiak Island to Lituya Bay and Sitka, Alaska.

Macoma calcarea Gmelin, 1792.

Arctic Ocean to North Japan and to Monterey Bay, Cal. Circumboreal.

Macoma moesta Deshayes, 1854.

Arctic Ocean, Bering Sea and eastward to the Shumagin Islands. Circumboreal.

Macoma nasuta Conrad, 1837.

Kadiak Island and Cook's Inlet, Alaska, south to Scammon Lagoon, Lower California.

Macoma inquinata Deshayes, 1854.

Bering Strait to Japan on the west and to Monterey Bay, Cal., on the east.

Macoma inquinata var. *arnheimi* Dall, 1916.

Kadiak Island, Alaska, and south to San Francisco. Pleistocene of San Pedro, Cal.

Macoma balthica Linné, 1758.

Circumboreal. Point Barrow, Arctic Ocean to North Japan and San Diego, Cal.

Macoma inflatula Dall, 1897.

Arctic Ocean and south to Ballenas Lagoon, Lower Cal.

Macoma leptonoidea Dall, 1895.

Santa Barbara Channel. Also Texas coast.

- Macoma quadrana** Dall, 1916.
Boca de Quadra, Alaska, and south to Coronado Islands,
Lower California.
- Macoma carlottensis** Whiteaves, 1880.
Arctic Ocean to Puget Sound.
- Macoma liotricha** Dall, 1897.
Aleutian Islands and eastward to the Shumagin Islands,
Alaska.
- Macoma expansa** Carpenter, 1865.
Puget Sound to San Pedro Bay, Cal.
- Macoma yoldiformis** Carpenter, 1864.
Fuca Strait to San Diego, Cal.
- Macoma truncaria** Dall, 1916.
Island near Cape Halkett, Arctic Ocean.
- Macoma alaskana** Dall, 1900.
Lituya Bay to Sitka, Alaska.

Section Rexithærus Conrad, 1869.

- Macoma indentata** Carpenter, 1866.
Santa Barbara, Cal., to Lower California.
- Macoma indentata** var. *tenuirostris* Dall, 1900.
San Pedro and the Santa Barbara Islands, to San Diego
(Kelsey).
- Macoma secta** Conrad, 1837.
Vancouver Island and south to the Gulf of Cal. Japan?

Family Semelidæ

Genus Semele Schumacher, 1817.

- Semele decisa** Conrad, 1837.
San Pedro to San Diego, Cal.
- Semele striosa** C. B. Adams, 1852.
Catalina Island, Cal., to Panama.
- Semele rupicola** Dall, 1915.
Santa Cruz, Cal., to Gulf of California.
- Semele rubropicta** Dall, 1871.
Forrester Island, Alaska, to Tia Juana, Lower California.
- Semele pacifica** Dall, 1915.
Catalina Island, Cal., to Acapulco.
- Semele incongrua** Carpenter, 1863.
Monterey, Cal., to the Coronado Islands.
- Semele pulchra** Sowerby, 1832.
Monterey, Cal., to Ecuador.

Genus Cumingia Sowerby, 1833.

Cumingia lamellosa Sowerby, 1833.

Crescent City, Cal., south to Payta, Peru. Japan?

Family Donacidæ

Genus Donax Linné, 1758.

Donax californica Conrad, 1837.

San Pedro, Cal., to Panama.

Donax lævigata Deshayes, 1854.

Santa Barbara, Cal., to Acapulco.

Donax punctostriata Hanley, 1843.

San Pedro, Cal., to Payta, Peru.

Donax conradi Deshayes, 1854.

San Diego, Cal., to Central America.

Family Psammobiidæ

Genus Psammobia Lamarck, 1818.

Subgenus Gobraeus Leach, 1852.

Gobraeus regularis Carpenter, 1864.

San Diego, Cal., to Cape St. Lucas.

Gobraeus californicus Conrad, 1848.

Japan, Kamchatka, the Aleutian Islands and south to San Diego, Cal.

Gobraeus edentulus Gabb, 1869.

San Pedro and Catalina Island, Cal., to San Diego. Also Pliocene of Cal.

Genus Sanguinolaria Lamarck, 1799.

Section Nuttallia Dall, 1897.

Sanguinolaria nuttallii Conrad, 1837.

San Pedro to San Diego, Cal.

Genus Heterodonax Mörch, 1853.

Heterodonax bimaculata Linné, 1758.

Monterey, Cal., to Panama. Also Atlantic.

Genus Tagelus Gray, 1847.

Tagelus californianus Conrad, 1837.

Santa Barbara, Cal., to Gulf of Tehuantepec.

Tagelus affinis C. B. Adams, 1852.

Santa Barbara, Cal., to Panama.

Subgenus Mesopleura Conrad, 1837.

Mesopleura subteres Conrad, 1837.

Santa Barbara, Cal., to Panama.

Superfamily Solenacea

Family Solenidæ

Genus Solen (L.) Scopoli, 1777.

Solen sicarius Gould, 1850.

Vancouver Island to San Diego, Cal.

Solen rosaceus Carpenter, 1863.

Santa Barbara, Cal., to Gulf of California.

Genus Ensis Schumacher, 1817.

Ensis californicus Dall, 1899.

Monterey, Cal., to Gulf of California.

Genus Siliqua Megerle, 1811.

Siliqua lucida Conrad, 1837.

Monterey, Cal., to Todos Santos Bay, Lower California.

Siliqua media Gray, 1839.

Arctic Ocean and south to the Okhotsk Sea, Bering Sea, and eastward to Cook's Inlet, Alaska.

Siliqua patula Dixon, 1788.

The Okhotsk Sea, the southern border of Bering Sea and eastward to Sitka, Alaska.

Siliqua patula var. *alta* Broderip and Sowerby, 1829.

Bering Strait, south to Unalashka and eastward to Kadiak Island, Alaska.

Siliqua patula var. *nuttallii* Conrad, 1837.

Lituya Bay, Alaska, and south to Monterey, Cal.

Superfamily Mactracea

Family Mactridæ

Genus Labiosa (Schmidt) Möller, 1832.

Labiosa undulata Gould, 1851.

San Pedro, Cal., to Panama.

Genus Mactra Linné, 1758.

Subgenus Mactrotoma Dall, 1894.

Mactrotoma dolabriformis Conrad, 1837.

Lobitas, Cal., to Topolobampo, Mexico.

Mactrotoma californica Conrad, 1837.

Neeah Bay, Wash., to San Diego, Cal.

Mactrotoma nasuta Gould, 1851.

San Diego, Cal., to Gulf of California.

Genus *Spisula* Gray, 1838.

Subgenus *Hemimactra* Swainson, 1840.

Section *Mactromeris* Conrad, 1868.

Hemimactra polynyma Stm., var. *alaskana* Dall, 1894.

Arctic Ocean at Cape Lisburne, south to Bering Sea and the Aleutians and eastward to Puget Sound. North Japan, the Kurile Islands and the Okhotsk Sea (Schrenck).

Hemimactra hemphilli Dall, 1894.

San Pedro to San Diego, Cal.

Hemimactra catilliformis Conrad, 1867.

Neeah Bay to San Diego, Cal.

Hemimactra falcata Gould, 1850.

Puget Sound to Cortez Bank and the Coronado Islands.

Subgenus *Symmorphomactra*, Dall, 1894.

Symmorphomactra planulata Conrad, 1837.

Monterey to Cape St. Lucas.

Genus *Schizothærus* Conrad, 1853.

Schizothærus nuttallii Conrad, 1837.

Wrangell, Alaska, to San Diego, Cal.

Schizothærus nuttallii var. *capax* Gould, 1850.

Kadiak Island, Alaska, to San Francisco, Cal.

Family *Mesodesmatidæ*

Genus *Ervilia* Turton, 1822.

Ervilia californica Dall, 1916.

San Pedro, Cal., to San Diego.

Superfamily *Myacea*

Family *Myacidae*

Genus *Mya* (L.) Lamarck, 1799.

Mya truncata Linné, 1758.

Circumboreal. Arctic Ocean to Bering Island on the west and to Puget Sound on the east.

Mya intermedia Dall, 1898.

Arctic Ocean from Point Barrow to Monterey Bay, Cal.

Mya arenaria Linné, 1758.

Victoria, B. C., to Monterey, Cal. Introduced at San Francisco with "seed" oysters from the Atlantic coast.

Genus *Cryptomya* Conrad, 1849.

Cryptomya californica Conrad, 1837.

Chichagoff Island, Alaska, and south to Topolobampo, Mexico.

Genus Sphenia Turton, 1822.

Sphenia fragilis Carpenter, 1857.

Oregon to Mazatlan.

Sphenia ovoidea Carpenter, 1865.

Aleutian Islands to Puget Sound and San Diego

Sphenia trunculus Dall, 1916.

San Diego, Cal., to Panama.

Sphenia pholadidea Dall, 1916.

Santa Barbara, Cal.

Genus Platyodon Conrad, 1837.

Platyodon cancellatus Conrad, 1837.

Baulinas Bay, Cal., to San Diego, Cal.

Family Corbulidæ

Genus Corbula Brugière, 1792.

Corbula obesa Hinds, 1843.

Catalina Island, Cal., to Panama.

Corbula fragilis Hinds, 1843.

Monterey, Cal., to Salina Cruz, Mexico.

Corbula luteola Carpenter, 1865.

Monterey, Cal., to San Diego.

Corbula porcella Dall, 1916.

Santa Rosa Island, Cal., to Panama.

Corbula kelseyi Dall, 1916.

Esteros Bay, to Catalina Island, Cal.

Genus Grippina Dall, 1912.

Grippina californica Dall, 1912.

Off San Diego Bay, Cal.

Family Saxicavidæ

Genus Panope Menard, 1807.

Panope generosa Gould, 1850.

Puget Sound to San Diego, Cal.

Panope generosa Gould, var. *solida* Dall, 1898.

Straits of Fuca to San Francisco Bay.

Genus Panomya (Gray) Adams, 1858.

Panomya (arctica) Lam. 1819, Atlantic) variety *turgida* Dall, 1916.

Unalashka to the Shumagin Islands, Alaska.

Panomya beringiana Dall, 1916.

Eastern Bering Sea.

Panomya ampla Dall, 1898.

Arctic Ocean north of Bering Strait, Bering Sea, Aleutian Islands and eastward to Kadiak Island, Alaska.

Genus Saxicavella Martens, 1885.

Saxicavella pacifica Dall, 1916.

Off Point Loma, San Diego, 131 fathoms.

Genus Cyrtodaria Daudin, 1799.

Cyrtodaria kurriana Dunker, 1862.

Arctic Ocean and south to Norton Sound, Alaska; also on the west coast of Greenland.

Genus Saxicava Fleuriau, 1802.

Saxicava arctica Linné, 1767.

Arctic Ocean to Panama. Also Atlantic.

Saxicava pholadis Linné, 1771.

Arctic Ocean to Panama. Also Atlantic.

Superfamily Adesmacea

Family Pholadidæ

Subfamily Pholadinae

Genus Barnea (Leach) Risso, 1826.

Barnea pacifica Stearns, 1871.

San Francisco Bay, to Lower California.

Genus Zirfaea (Leach) Gray, 1847.

Zirfaea gabbi Tryon, 1873.

Bering Sea and islands and south to San Diego, Cal.

Subfamily Jouannetinae.

Genus Parapholas Conrad, 1848.

Parapholas californica Conrad, 1837.

Monterey to San Diego, Cal.

Genus Pholadidea Turton, 1819.

Pholadidea penita Conrad, 1837.

Chirikoff Islands, Alaska, and south to San Pedro, Cal.

Pholadidea penita var. *concamerata* Deshayes, 1839.

Bering Sea and islands and south to San Diego, Cal.

Pholadidea penita var. *sagitta* Stearns, 1916.

Puget Sound to Socorro Island.

Pholadidea ovoidea Gould, 1851.

Bering Sea and islands, and south to the Gulf of Cal.

Pholadidea parva Tryon, 1865.San Pedro, Cal., to Lower California, in shells of *Haliotis*.*Subgenus* *Nettastomella* Carpenter, 1865.**Nettastomella rostrata** Valenciennes, 1846.

Puget Sound to San Diego, Cal.

Genus *Martesia* (Leach) Blainville, 1824.**Martesia xylophaga** C. B. Adams, 1852.

San Francisco, Cal., to Panama.

Martesia intercalata Carpenter, 1855.

Farallones Islands to Catalina Island, Cal.

Genus *Navea* Gray, 1851.**Navea subglobosa** Gray, 1851.

Lobitas to Monterey, Cal.

Genus *Xylophaga* Turton, 1822.**Xylophaga mexicana** Dall, 1908.

Monterey, Cal., to Acapulco.

Family *Teredidæ**Genus* *Xylotrya* (Leach) Gray, 1847.**Xylotrya** ? species.

Bering Island, Bering Sea.

Xylotrya setacea Tryon.

Bering Sea to Gulf of California.

Genus *Teredo* Linné, 1758.**Teredo diegensis** Bartsch, 1916.

San Diego, Cal.

SYNONYMIC NOTES.

Angulus modestus Cpr., var. *obtusus*, Cpr., 1864, see *Oudardia buttoni*.**Anomia lampe** Gray, 1849, see *A. peruviana* Orb. 1846.**Avicula** Lam. 1799, see *Pteria* Scopoli, 1777.**Cumingia californica** Conr. 1837, see *C. lamellosa* Sby, 1833.

Modiolaria Beck, 1846, see *Musculus* Bolten, 1798.

Mysella, see *Rochefortia*.

Nettastomella darwini, see *N. rostrata*.

Oedalina, see *Cooperella*.

Pachydesma crassatelloides Conr. 1837, see *P. stultorum* Mawe, 1823.

Panomya norvegica Spengler, see *P. arctica* Lamarck.

Pectunculus Lam. 1799, see *Glycymeris* Da Costa, 1778.

Pinna, see *Atrina*.

Pristiphora, see *Serridens*.

Rupellaria, see *Venerupis*.

Tapes, see *Protothaca*.

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